

Surname	Centre Number	Candidate Number
Other Names		0

GCSE – NEW



C550U10-1



PHYSICAL EDUCATION (FULL COURSE)
Component 1: Introduction to Physical Education

WEDNESDAY, 16 MAY 2018 – MORNING

2 hours

For Examiner's use only		
Question	Maximum Mark	Mark Awarded
1.a	5	
1.b	6	
1.c	7	
1.d	8	
2.a	7	
2.b	1	
2.c	8	
2.d	4	
3.a	4	
3.b	5	
3.c	6	
3.d	8	
4.a	7	
4.b	8	
4.c	4	
4.d	4	
5.a	3	
5.b	13	
5.c	8	
5.d	4	
Total	120	

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen.

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **all** questions.

Write your answers in the spaces provided in this booklet. If you run out of space, use the continuation page at the back of the booklet, taking care to number the question(s) correctly.

Diagrams, charts and graphs can be used to support answers when they are appropriate.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets at the end of each question or part-question.

You are reminded of the necessity for good English and orderly presentation in your answers.

Answer all questions.

1. The following is a still picture of a gymnast.

Figure 1



- (a) (i) Name the type of synovial joint shown at A (shoulder). [1]

- (ii) Identify the muscle(s) shown at B. **Tick (✓) one** box only. [1]

Pectoral

Quadriceps

Deltoid

Gastrocnemius

(iii) Identify the type of muscular contraction shown in **Figure 1**. Tick (✓) **one** box only. [1]

Isotonic eccentric

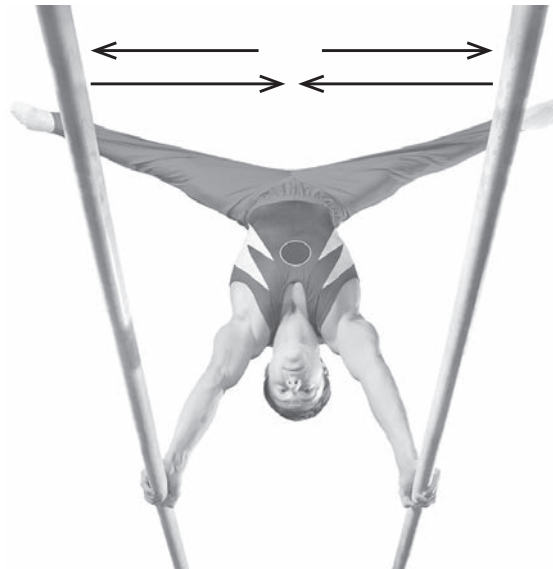
Isometric

Isotonic concentric

(iv) Justify your answer given in (a)(iii). [2]

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Figure 2



(b) (i) Identify the plane that the gymnast is working in. [1]

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(ii) Identify the movements that can take place at the legs in **Figure 2**. [2]

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(iii) State **three** functions of the skeletal system. [3]

- 1
- 2
- 3

(c) (i) Define the term flexibility, and explain why it is important to a gymnast. [3]

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(ii) Passive and dynamic stretching are two ways of improving flexibility. Explain each method in the box below. [4]

Type of stretching	Explanation
Passive	
Dynamic	

(d) Different methods of guidance are needed to teach gymnastics skills successfully. Analyse the different types of guidance and how they could be effective in improving performance in a sport of your choice. [8]

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2. The table below shows how often adults are playing sport at a moderate intensity for 30 minutes or more.

Number of adults participating	2005/6	2015/16
At least once a week	14.1 m	16 m
At least three times a week	6.6 m	7.8 m

(a) (i) What has happened to participation rates during this period of time? [1]

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(ii) Discuss, using the data above, factors that may have affected participation rates. [6]

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(b) Identify the normal **resting** blood pressure for a healthy individual. Tick (✓) **one** box below.

[1]

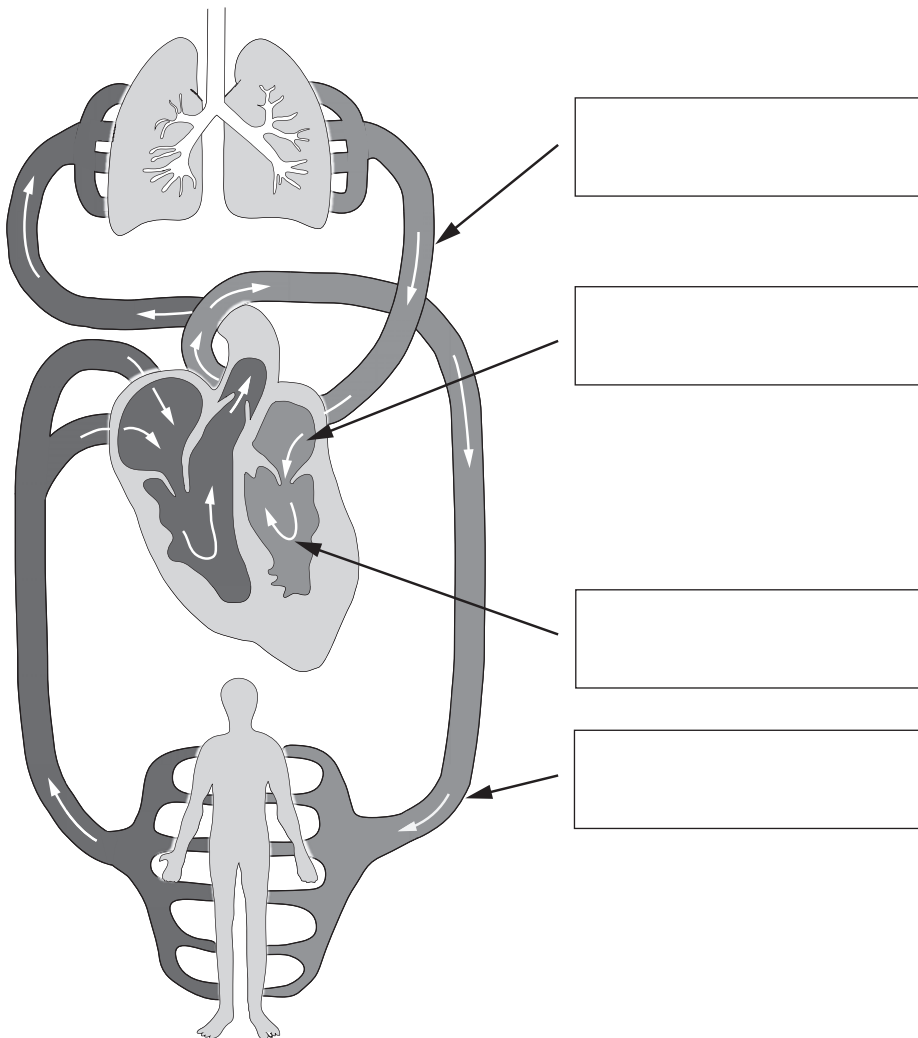
140/50 mmHg

200/90 mmHg

120/80 mmHg

(c) (i) Place the terms listed below in the correct boxes.

[4]



A

Systematic
circulatory
system

B

Ventricle

C

Atrium

D

Pulmonary
circulatory
system

(ii) Explain **two** functions of the cardio-vascular system during exercise.

[4]

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(d) (i) Explain what is meant by the energy balance equation.

[3]

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(ii) Identify the main nutrient responsible for growth and repair.

[1]

Tick (✓) **one** box below.

Carbohydrate

Fat

Protein

Vitamins

3. Athletes need to use the principles of training to ensure there is improvement in performance.

(a) (i) Describe the principles of specificity and variance. [2]

Specificity

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Variance

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(ii) Explain how specificity and variance can be used in a training programme for a sport of your choice. [2]

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(b) (i) Identify **three** ways in which you have been motivated by a coach or teacher to help improve your performance. [3]

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(ii) Explain how imagery could be effective for a performer.

[2]

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(c) (i) Information processing is vital when learning new skills to improve performance.

Complete the table below.

[4]

Information processing model	Description
Input	
Decision making	
Output	
Feedback	

(ii) Using examples, explain the difference between knowledge of results and knowledge of performance.

[2]

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(d) Analyse how participating in physical activity can improve the long-term health of an individual. [8]

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Figure 3



4. (a) A swimming stroke, is classified as a complex skill.



(i) Justify why swimming is classified as a complex skill. [2]

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(ii) Identify and explain a type of practice used to develop a complex skill in an activity of your choice. [3]

Activity

Type of Practice

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(iii) Identify **two** short term effects of strenuous exercise on the body. [2]

1.

2.

(c) Describe, using examples, **one** characteristic of fast twitch and slow twitch muscle fibres. [4]

Fibre type	Characteristic	Example sport
Fast		
Slow		

(d) Explain the effects of over and under hydration on a sports performer. [4]

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5. Cardio-vascular endurance, speed, agility and power are some of the components of fitness needed for a games player.

(a) (i) Define cardio-vascular endurance. [1]

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(ii) Justify why cardio-vascular endurance is needed by a games player. [2]

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(b) (i) Explain **one** method of training that could be used to develop cardio-vascular endurance. [3]

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(ii) Name and describe a recognised fitness test used for each of the components of fitness listed in the table below. [6]

Component of fitness	Name of the test	Brief description of test
Speed
Agility

(iii) Explain why fitness tests need to have validity and reliability. [4]

Validity

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Reliability

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(c) Assess how knowledge of different training zones could help improve the performance of a marathon runner. [8]

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(d) Discuss why the warm up and cool down are important parts of a training session. [4]

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END OF PAPER

For continuation only.

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